

CLAIMS

1. An image capturing processing method comprising:
 - a first step of capturing an image by a camera;
 - a second step of detecting, in an upper region of the image captured in the first step,
 - 5 feature data of the image and calculating a correction amount from the feature data; and
 - a third step of performing, based on the correction amount calculated in the second step, correction control of an optical system of the camera or correction of image data of the image.
- 10 2. The method of claim 1, wherein the second step includes the steps of:
 - extracting a perpendicular edge element in the upper region;
 - detecting, as the feature data, a roll amount of the image based on the perpendicular
 - edge element; and
 - calculating a roll correction amount of the image based on the roll amount.
- 15 3. The method of claim 2, wherein
 - in the second step, the roll correction amount is calculated using a roll amount at a
 - current time and a roll amount at a previous time.
- 20 4. The method of claim 2, wherein the second step includes the steps of:
 - detecting, in addition to the roll amount, a motion vector as the feature data in the
 - upper region; and
 - calculating a motion correction amount of the image based on the motion vector.
- 25 5. The method of claim 1, wherein the second step includes the steps of:

obtaining an intensity in the upper region;

detecting an exposure state of the image, as the feature data, based on the obtained intensity; and

calculating an exposure correction amount based on the exposure state.

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6. The method of claim 5, wherein

the exposure correction is backlight correction or excessive forward light correction.

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7. The method of claim 1, further comprising:

a fourth step of detecting an attitude of the camera; and

a fifth step of adjusting a range of the upper region in the second step according to the camera attitude detected in the fourth step.

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8. The method of claim 7, wherein

in the fourth step, data for the detected attitude of the camera is smoothed in the time direction.

9. An image capturing processing method comprising:

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a first step of capturing images by a plurality of cameras, respectively;

a second step of detecting, in an upper region of each of the images captured in the first step, a roll amount of the image;

a third step of synthesizing respective roll amounts of the images detected in the second step;

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a fourth step of performing, based on a synthesis roll amount obtained in the third

step, roll correction to each of the images; and

a fifth step of synthesizing the images to which roll correction has been performed in the fourth step to obtain a synthesized image.

5 10. An image capturing processing method comprising:

a first step of capturing images by a plurality of cameras, respectively;

a second step of detecting, in an upper region of each of the images captured in the first step, a roll amount of the image;

10 a third step of judging, from respective roll amounts of the images detected in the second step, whether to synthesize the images; and

a fourth step of synthesizing, if it is judged that synthesis should be performed in the third step, the images to obtain a synthesized image.

11. An image capturing processing method comprising:

15 a first step of capturing images by first and second cameras, respectively;

a second step of detecting, in an upper region of a first image captured by the first camera in the first step, a roll amount of the first image; and

a third step of performing, based on a roll amount detected in the second step, roll correction to a second image captured by the second camera.

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12. An image capturing system comprising:

a camera for capturing an image;

a region limiting section for limiting image data of an image captured by the camera to an upper region of the image and outputting the limited image data;

25 a correction amount calculation section for detecting, from the limited image data

output from the region limiting section, feature data of the image and calculating a correction amount from the feature data; and

- a correction section for performing, based on a correction amount calculated by the correction amount calculating section, correction control of an optical system of the
- 5 camera or correction of the image.